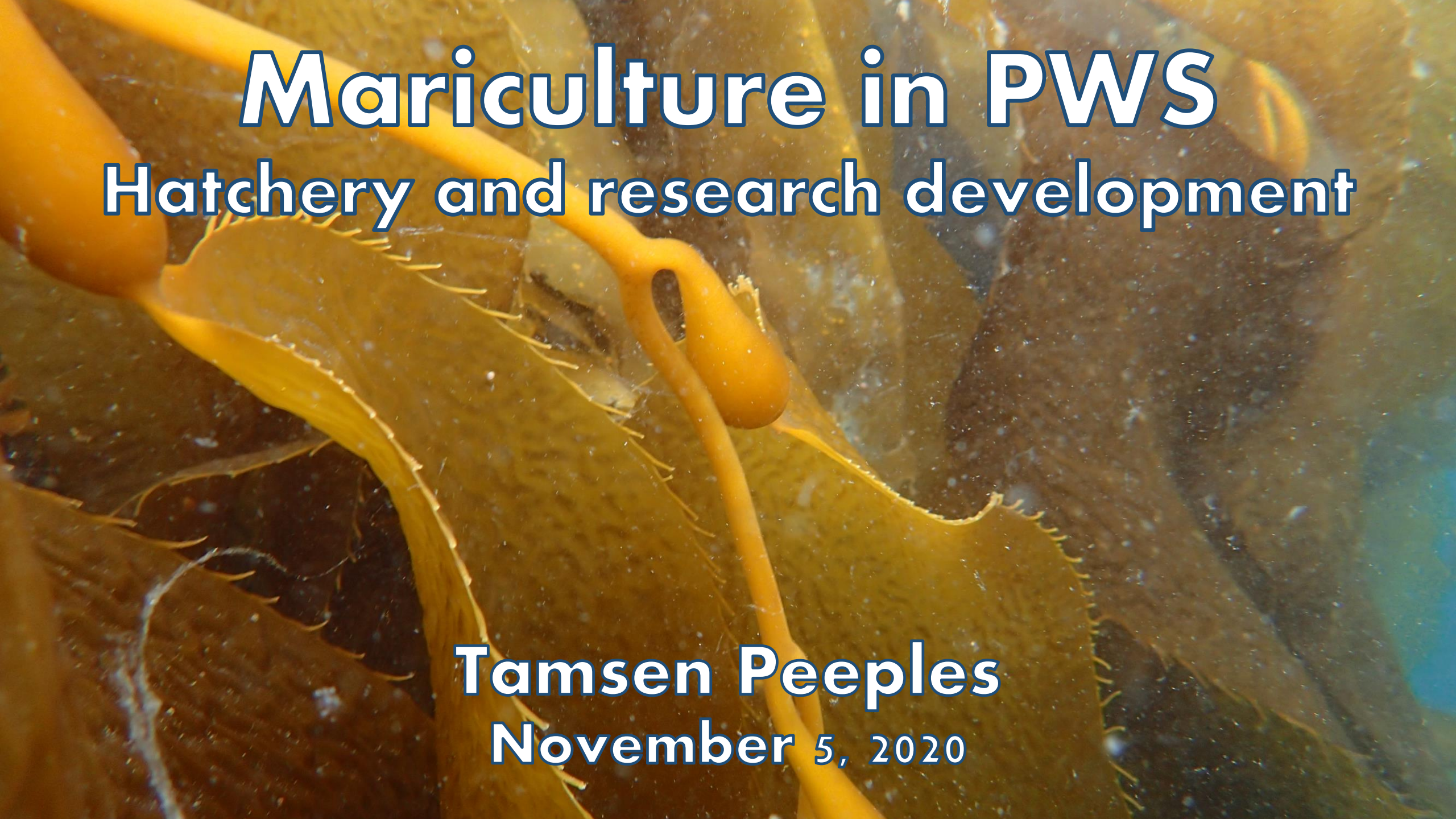


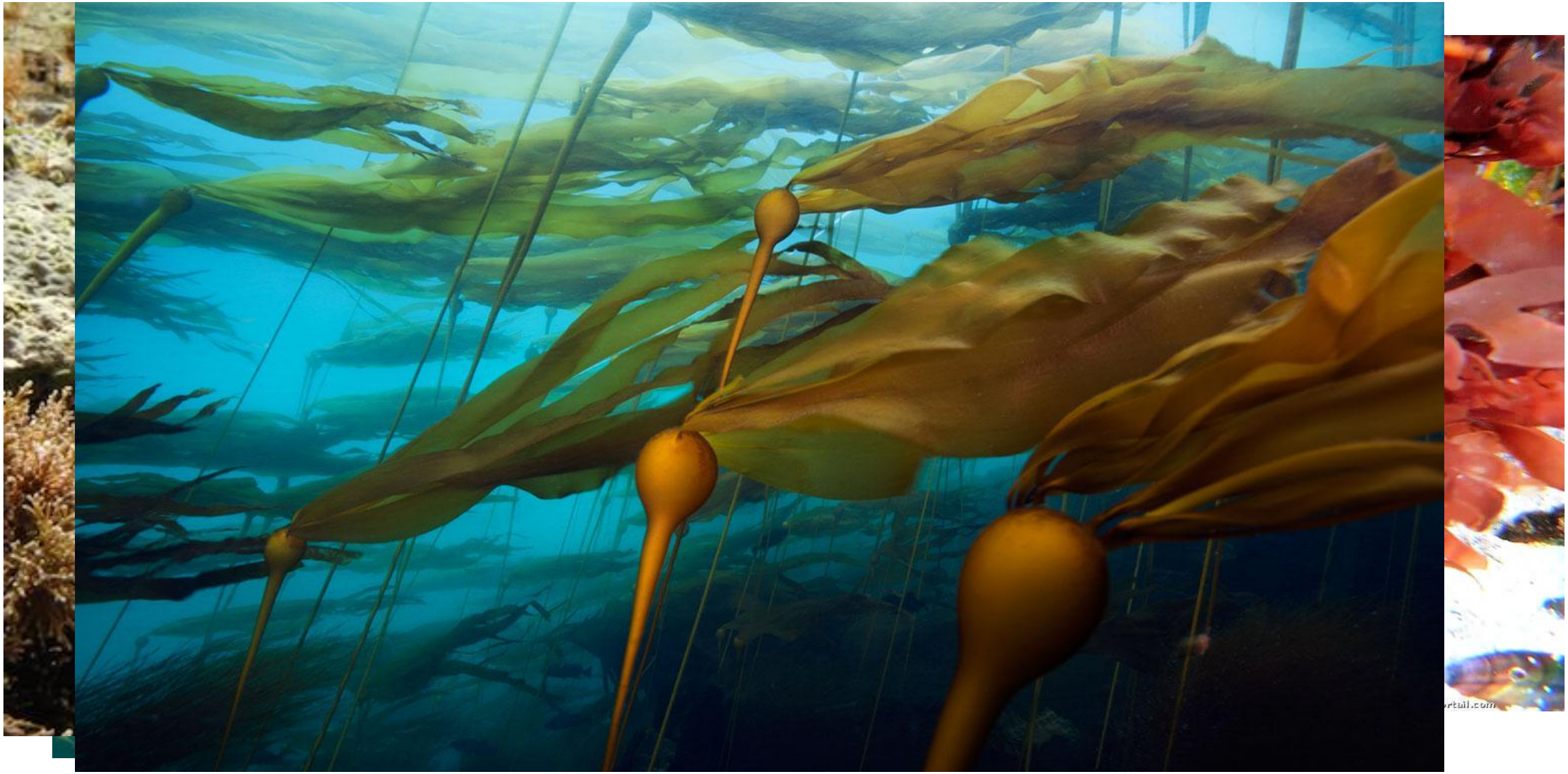
Mariculture in PWS

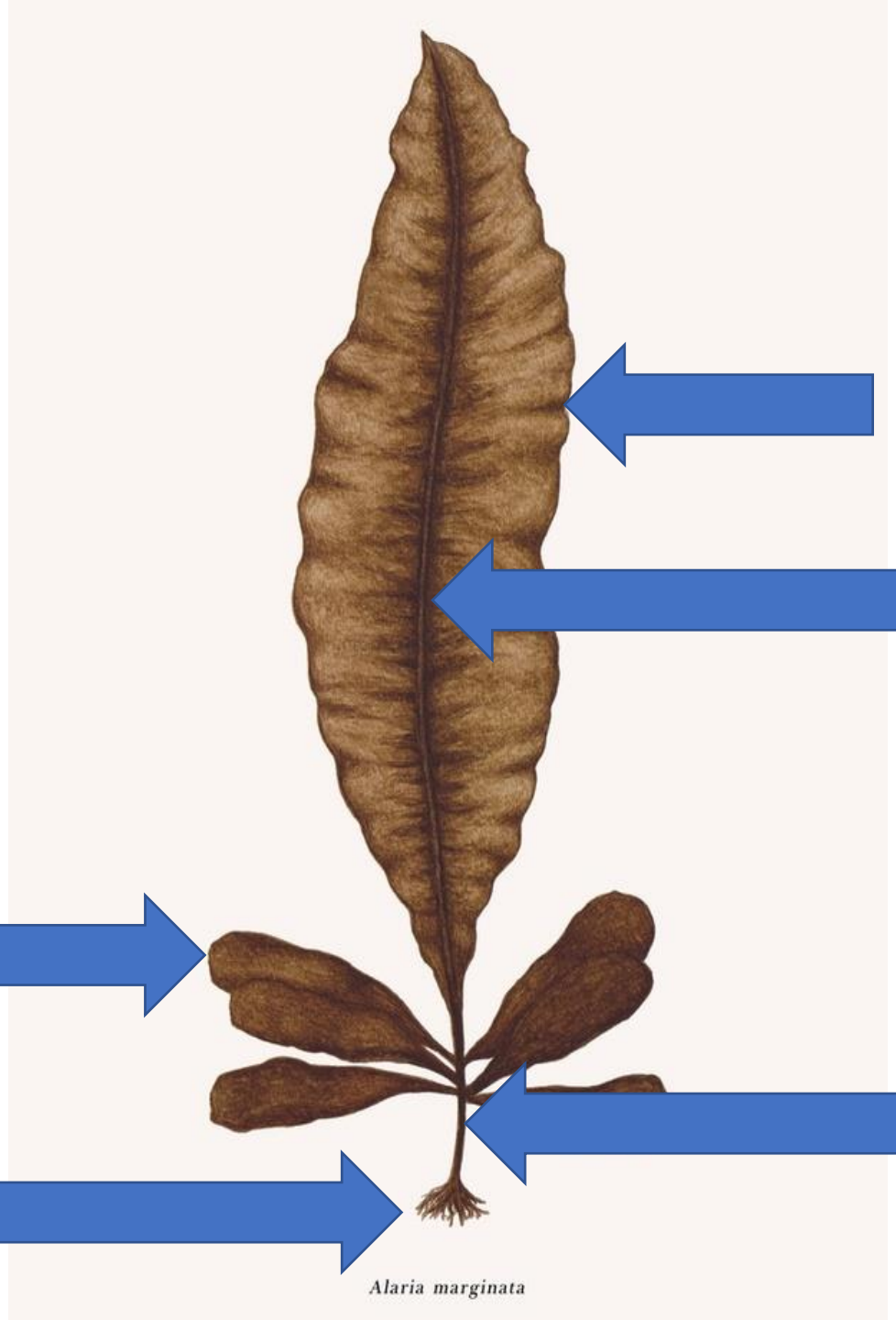
Hatchery and research development

Tamsen Peeples

November 5, 2020

Algae, Seaweed and Kelp




Blade
Midrib
Sporophyll
Stipe
Holdfast
Alaria marginata

Current AK Mariculture Species

Alaria sp.

Saccharina sp.

Nereocystis sp.

Wild Harvest AK Species

opia sp.

Fucus sp.

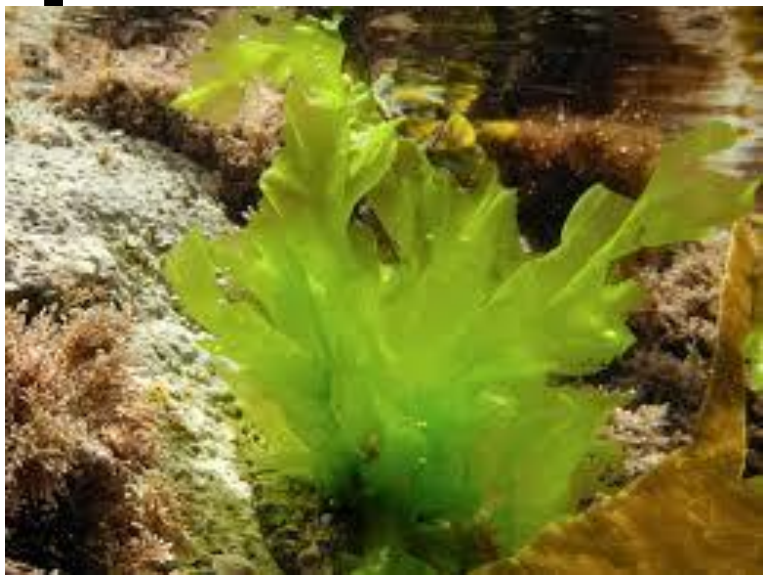
Nereocystis sp.

Potentially Viable AK Species

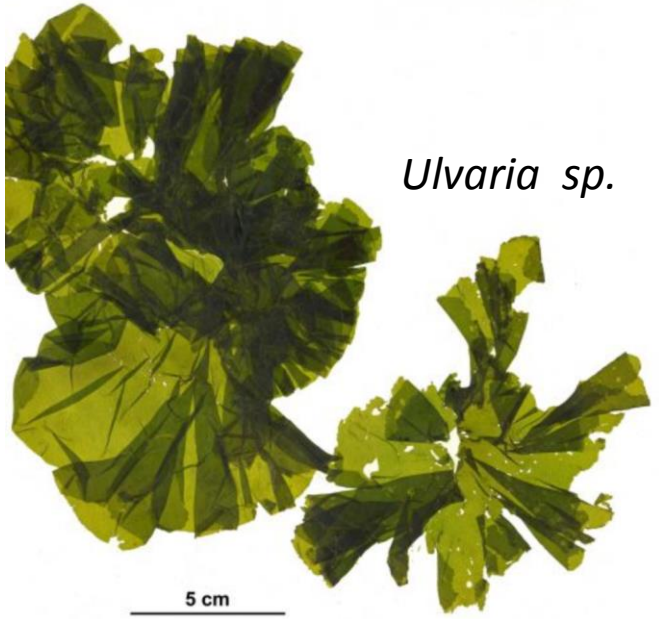
Laminaria sp.

Eualaria sp.

Sargassum sp.



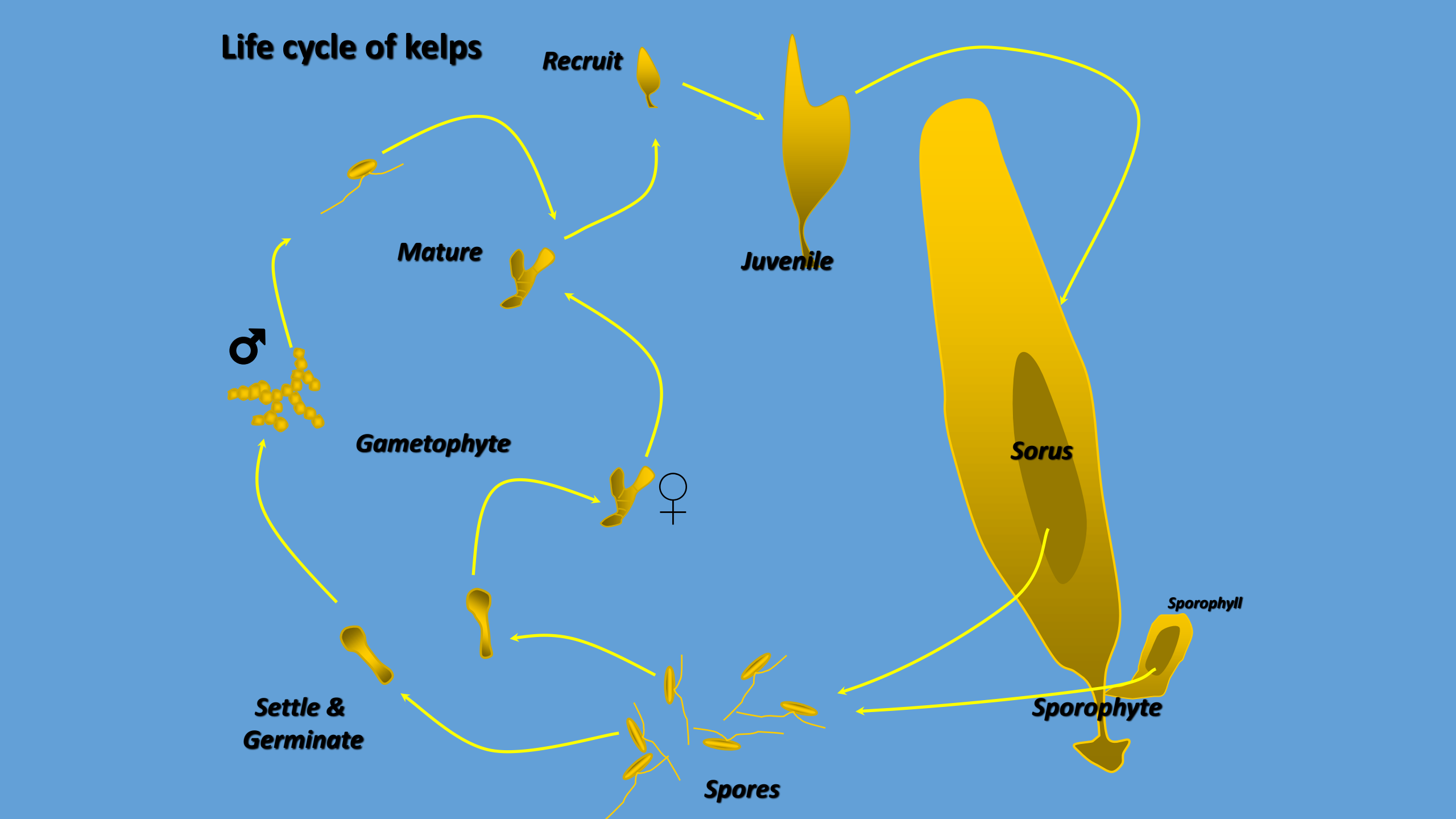
Ulva sp.



Ulvaria sp.

www.seaweedsofalaska.com

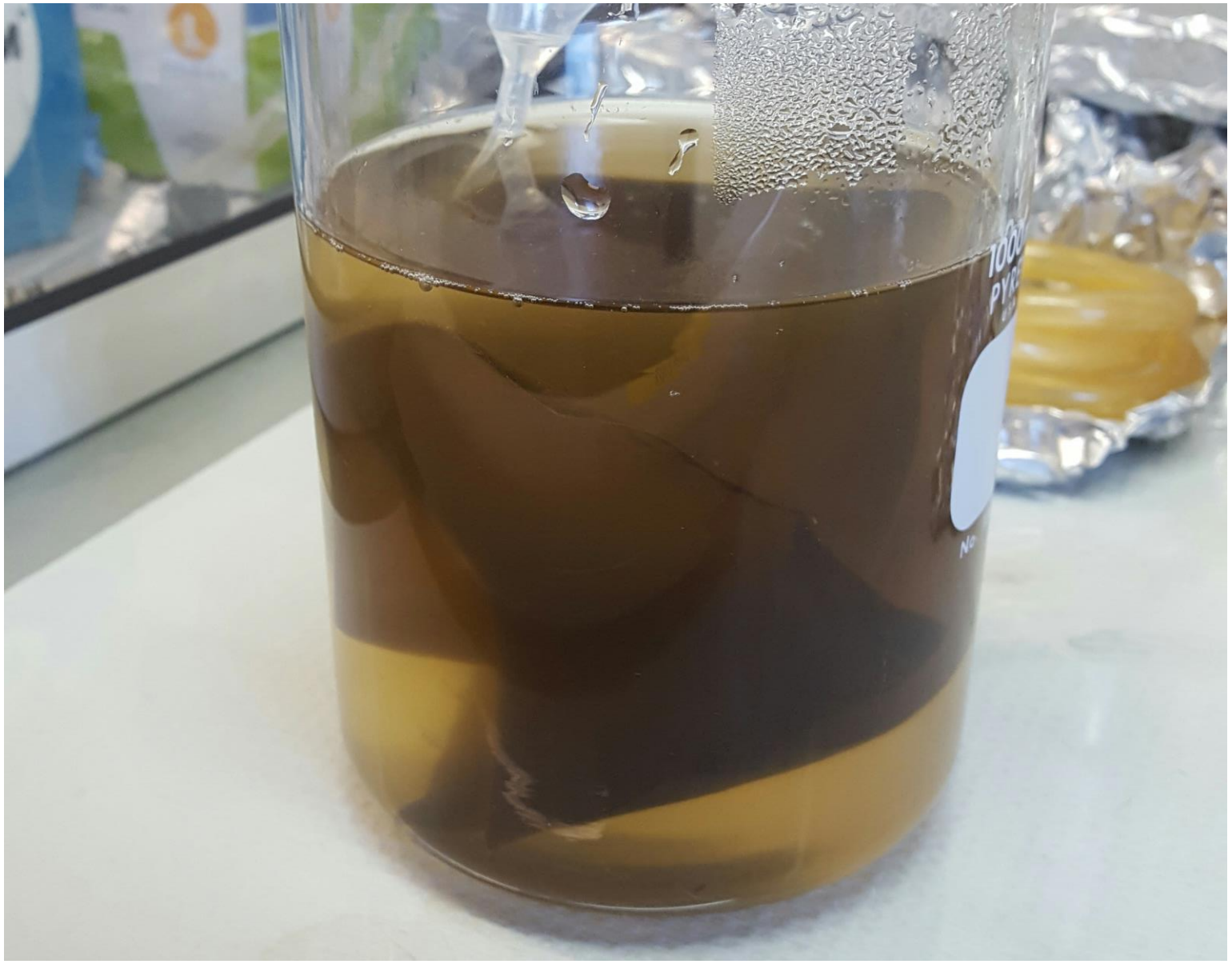
Kelp Mariculture Process

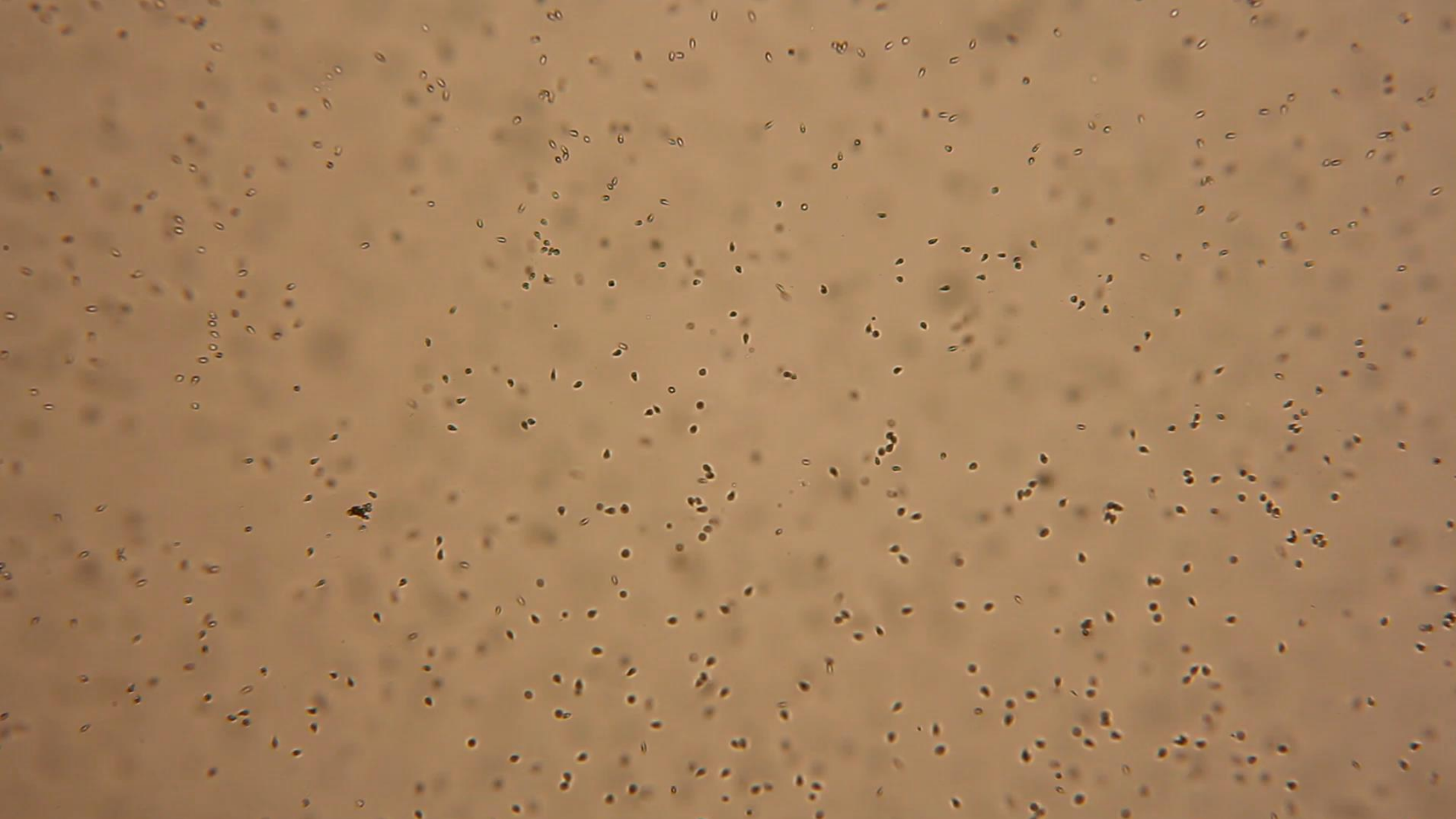

Life cycle of kelps
Recruit
Juvenile
Mature
♂
Gametophyte
♀
Sorus
Sporophyll
Sporophyte
Settle &
Germinate
Spores

1: Locate fertile plants

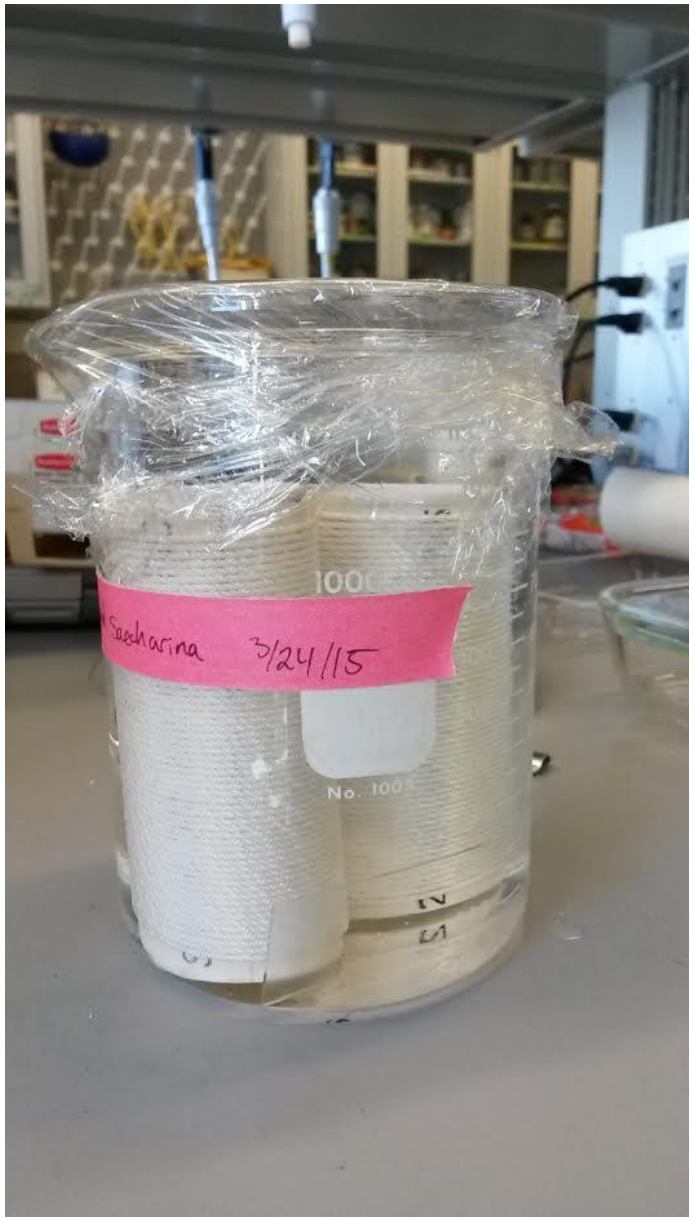

169

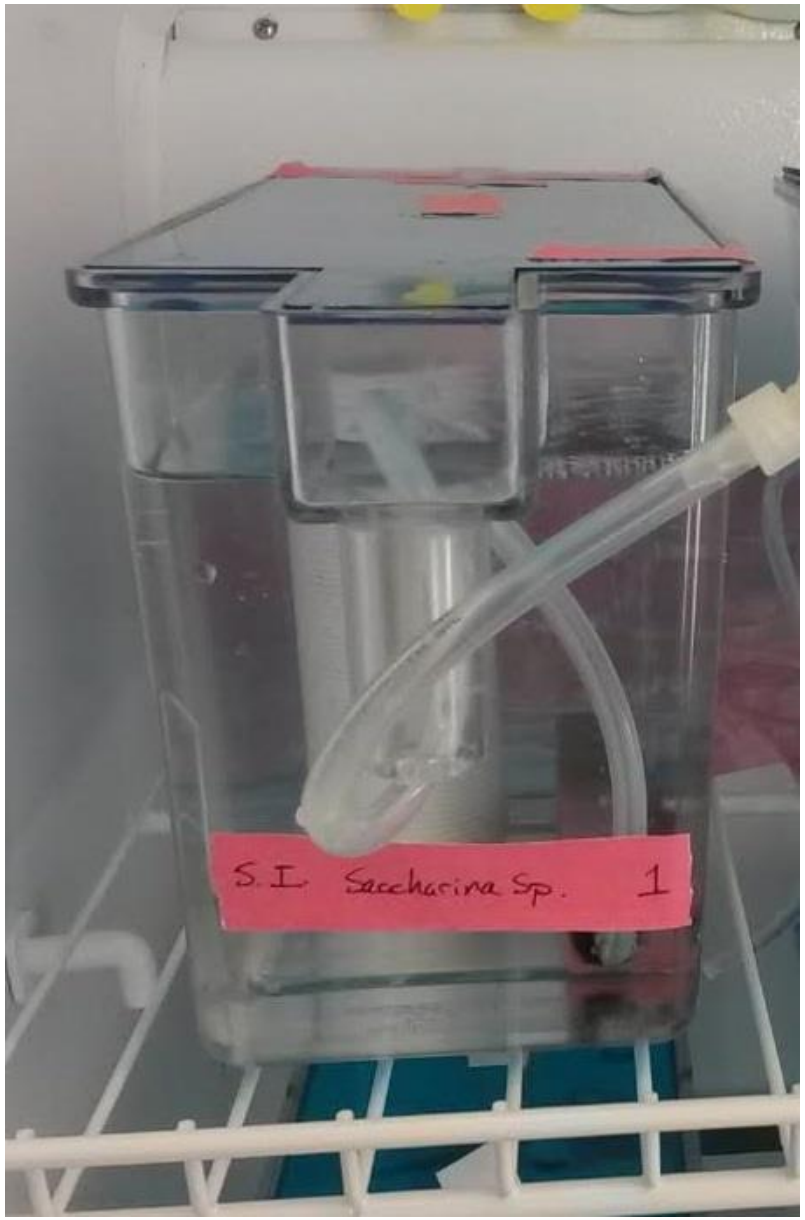
2: Release spores





3: Inoculate pipes





4: Incubate pipes

Hatchery Operations

- Temperature control (10-12C)
- Light (12:12 full spectrum)
- Clean, sterile sea water

Hatchery Operations

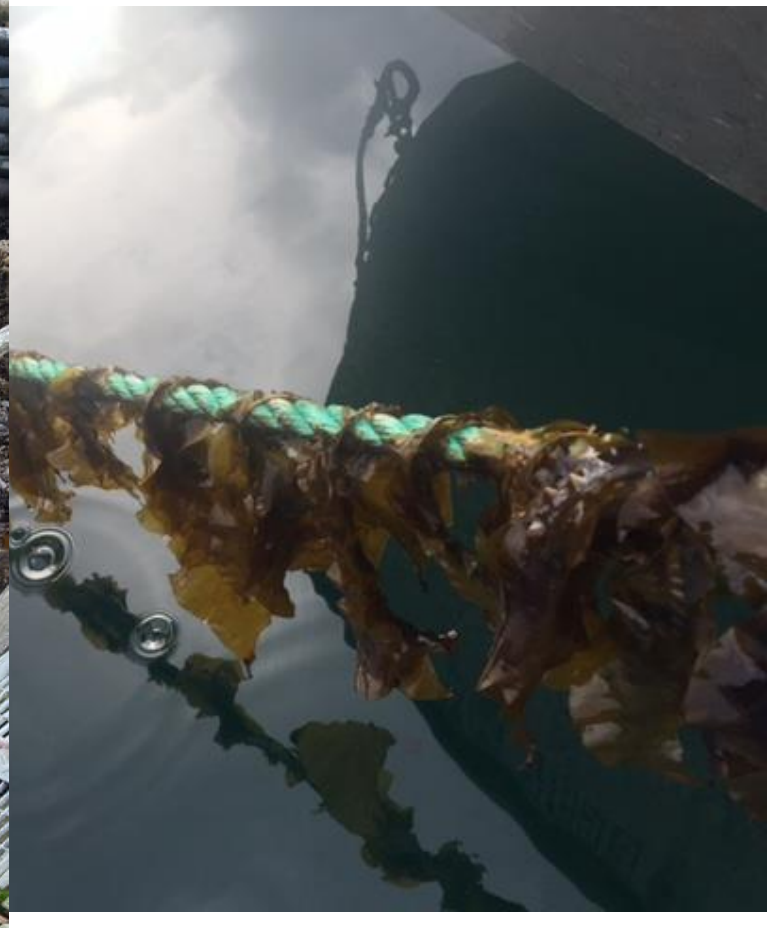
6: Outplanting


BOX NO.
GROSS WT.
NET WT.
SPECIES
UP


BOX NO.
GROSS WT.
NET WT.
SPECIES


NET WT.
SPECIES
UP

7: Growth Period



8: Harvest

Processing

Division of Environmental Health
FOOD SAFETY & SANITATION PROGRAM

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HOME BASED FOOD BUSINESS

Alaska Food Code allows the sale of non-potentially hazardous foods sold directly to the consumer without a permit as long as certain conditions are met. Food that falls under this exemption is commonly referred to as a "Cottage Food." More information about selling these products can be found below.

If you do not find information you are looking for, please contact your local Environmental Health Officer. If you plan on selling your products within the Municipality of Anchorage, these exemptions may not apply.

https://dec.alaska.gov/eh/fss/food/cottage-food/

Drying

http://sitkavores.blogspot.com/2016/01/seaweed.html

https://best.visit-hokkaido.jp/nature/story/hokkaido-kombu/

Cooking/Blanching/Pickling

https://global.rakuten.com/en/store/cocochi-oki/item/10001085/

https://kanika.com.my/product/seasoned-seaweed-chuka-wakame/

Photo: Barnace Seafoods

Research and Development

Photo: M. Stekoll

Salinity and Temperature

Other Factors

- Current
- Nutrients
  - Nitrite
  - Nitrate
  - Phosphorous

Current R&D Projects

Kelp Research

- Morphology study
- ARPA-e test farm and harvest technology
- Multiple grants focusing on genetics
- Herring deterrents

Hatchery Development

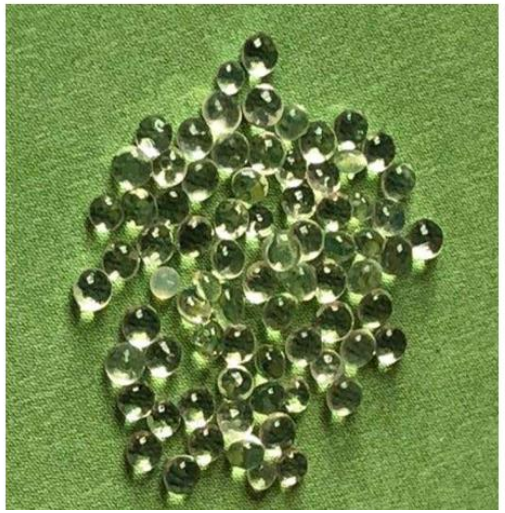
- Mobile hatchery and Alutiiq Pride in Seward
- Fertilizer Experiment
- Direct seeding

Processing and Marketing

- AFDF market assessment
- AFDF and ASG product development

kelp THE WORLD™

Seaweed as Bio-Plastic



New USDA-funded project: Spawning Mariculture Businesses in SW Alaska

- Goal: Grow new mariculture businesses in SW AK
- Project timeline: Oct. 1, 2019 – Sept. 30, 2021
- Partners: AFDF, SWAMC, APICDA
- Funders: USDA-RD, SWAMC & APICDA
- Contractor: Tamsen Peeples
- Outreach & technical assistance provided in SW Alaska communities

USDA Rural Development
Committed to the future of rural communities.

SWAMC
Southwest Alaska Municipal Conference

AFDF

Aleutian Pribilof Island Community Development Association
APICDA
Hagina Kidul - Helping to Grow
Alaska

Photo: T. Peeples

Thank you

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Photo: Huff Post